

Form PTO-1449  
(MODIFIED)U.S. DEPARTMENT OF COMMERCE  
PATENT AND TRADEMARK OFFICE

ATTY. DOCKET NO.

038602-1026

SERIAL NO.

08/426,509

## INFORMATION DISCLOSURE CITATION

(Use several sheets if necessary)

APPLICANT

Axel ULLRICH et al.

FILING DATE

April 21, 1995

GROUP ART UNIT

1646

1647

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL	REF	DOCUMENT NUMBER	DATE	NAME	CLASS	SUB- CLASS	FILING DATE IF APPROPRIATE

## FOREIGN PATENT DOCUMENTS

	REF	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB- CLASS	TRANSLATION	
							YES	NO

## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

8	BR	Devereux et al., "A comprehensive set of sequence analysis programs for the VAX," <i>Nucl. Acids Res.</i> , 12(1):387-395 (1984).
	BS	Heldin and Westermark, "Plateler-derived growth factor: mechanism of action and possible <i>in vivo</i> function." <i>Cell Regulation</i> , 1:555-566 (July, 1990).
	BT	Hiraj et al., "A Novel Putative Tyrosine Kinase Receptor Encoded by the <i>eph</i> Gene," <i>Science</i> , 238:1717-1720 (December 18, 1987).
	BU	Huang et al., "The Hematopoietic Growth Factor KL is Encoded by the <i>Sf</i> Locus and Is the Ligand of the <i>c-kit</i> Receptor, the Gene Product of the <i>W</i> Locus," <i>Cell</i> , 63:225-233 (October 5, 1990)
9	BV	Lichter et al., "Delineation of individual human chromosomes in metaphase and interphase cells by <i>in situ</i> suppression by bridization using recombinant DNA libraries," <i>Hum. Genet.</i> , 80:224-234 (1988).

EXAMINER

J. L. [Signature]

DATE CONSIDERED

6/4/97

\* EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include any copy of this form with next communication to applicant.

U.S. DEPARTMENT OF COMMERCE  
PATENT AND TRADEMARK OFFICE

038602-1026

08/426,509

## INFORMATION DISCLOSURE CITATION

*(Use several sheets if necessary)*

**APPLICANT**

Axel ULLRICH et al.

FILING DATE

04/21/1995

GROUP ART UNIT

~~1646~~ 1647

**OTHER DOCUMENTS** (Including Author, Title, Date, Pertinent Pages, Etc.)

[illegible]

Form PTO-1449  
(MODIFIED)U.S. DEPARTMENT OF COMMERCE  
PATENT AND TRADEMARK OFFICE

ATTY. DOCKET NO.

038602-102

SERIAL NO.

08/426,509

## INFORMATION DISCLOSURE CITATION

(Use several sheets if necessary)

APPLICANT

Axel ULLRICH et al.

FILING DATE

April 21, 1995

GROUP ART UNIT

~~1646~~ 1647

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL	REF	DOCUMENT NUMBER	DATE	NAME	CLASS	SUB- CLASS	FILING DATE IF APPROPRIATE

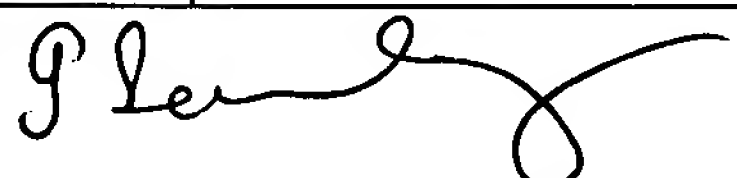
## FOREIGN PATENT DOCUMENTS

	REF	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB- CLASS	TRANSLATION	
							YES	NO

## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

8	BR	Devereux et al., "A comprehensive set of sequence analysis programs for the VAX," <i>Nucl. Acids Res.</i> , 12(1):387-395 (1984).
	BS	Heldin and Westermark, "Platelet-derived growth factor: mechanism of action and possible <i>in vivo</i> function." <i>Cell Regulation</i> , 1:555-566 (July, 1990).
	BT	Hiraj et al., "A Novel Putative Tyrosine Kinase Receptor Encoded by the <i>eph</i> Gene," <i>Science</i> , 238:1717-1720 (December 18, 1987).
	BU	Huang et al., "The Hematopoietic Growth Factor KL is Encoded by the <i>Sf</i> Locus and Is the Ligand of the <i>c-kit</i> Receptor, the Gene Product of the <i>W</i> Locus," <i>Cell</i> , 63:225-233 (October 5, 1990)
V	BV	Lichter et al., "Delineation of individual human chromosomes in metaphase and interphase cells by <i>in situ</i> suppression by hybridization using recombinant DNA libraries," <i>Hum. Genet.</i> , 80:224-234 (1988).

EXAMINER

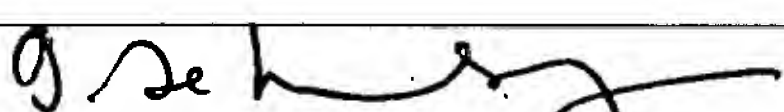


DATE CONSIDERED

6/4/97

\* EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include any copy of this form with next communication to applicant.

Form PTO-1449 (MODIFIED)		U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		ATTY. DOCKET NO. 038602-1026		SERIAL NO. 08/426,509	
<b>INFORMATION DISCLOSURE CITATION</b>  (Use several sheets if necessary)				APPLICANT Axel ULLRICH et al.			
				FILING DATE 04/21/1995		GROUP ART UNIT <del>1646</del> 1647	
<b>OTHER DOCUMENTS</b> (Including Author, Title, Date, Pertinent Pages, Etc.)							
8	BW	Morgenstern and Land, "Advanced mammalian gene transfer: high titre retroviral vectors with multiple drug selection markers and a complementary helper-free packaging cell line," <i>Nucl. Acids Res.</i> , 18(12):3587-3596 (1990).					
	BX	Mustelin and Burn, "Regulation of src family tyrosine kinases in lymphocytes," <i>TIBS</i> . 18:215-220 (1993).					
	BY	Pear et al., "Production of high-titer helper-free retroviruses by transient transfection," <i>Proc. Natl. Acad. Sci. USA</i> . 90:8392-8396 (September, 1993).					
	BZ	Sherr et al., "The <i>c-fms</i> Proto-oncogene Product is Related to the Receptor for the Mononuclear Phagocyte Growth Factor, CSF-1," <i>Cell</i> . 41:665-676 (July, 1985).					
	CA	Staunton et al., "The Arrangement of the Immunoglobulin-like Domains of ICAM-1 and the Binding Sites for LFA-1," <i>Cell</i> . 61:243-254 (April 20, 1990).					
	CB	Wang, "Nuclear protein tyrosine kinases," <i>TIBS</i> . 19:373-379 (September, 1994).					
	CC	Wilks, "Two putative protein-tyrosine kinases identified by application of the polymerase chain reaction," <i>Proc. Natl. Acad. Sci. USA</i> . 86:1603-1607 (March 1989).					
	CD	Tsukada et al., <i>Cell</i> . 72:279-290, 1991.					
	CE	Yamada et al., <i>Biochem. Biophys. Res. Comm.</i> 172:231-240, 1993.					
	CF	Hamaguchi et al., "Characterization of mouse non-receptor tyrosine kinase gene, HYL," <i>Oncogene</i> , (1994), 9, 3371-3374, Macmillan Press Ltd., 1994.					
✓	CG	Tamagnone et al., "BMX, a novel nonreceptor tyrosine kinase gene of the BTK/ITK/TEC/TXK family located in chromosome Xp22.2," <i>Oncogene</i> (1994), 9, 3683-3688, Macmillan Press Ltd., 1994					


 8/4/97



Form PTO-1449  
(MODIFIED)U.S. DEPARTMENT OF COMMERCE  
PATENT AND TRADEMARK OFFICE

ATTY. DOCKET NO.

038602-1026

SERIAL NO.

08/426,509

## INFORMATION DISCLOSURE CITATION

(Use several sheets if necessary)

APPLICANT

Axel ULLRICH et al.

FILING DATE

April 21, 1995

GROUP ART UNIT

1646-1647

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL	REF	DOCUMENT NUMBER	DATE	NAME	CLASS	SUB- CLASS	FILING DATE IF APPROPRIATE

## FOREIGN PATENT DOCUMENTS

	REF	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB- CLASS	TRANSLATION	
							YES	NO

## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

	BR	Devereux et al., "A comprehensive set of sequence analysis programs for the VAX," <i>Nucl. Acids Res.</i> , 12(1):387-395 (1984).
	BS	Heldin and Westermarck, "Platelet-derived growth factor: mechanism of action and possible <i>in vivo</i> function." <i>Cell Regulation</i> , 1:555-566 (July, 1990).
	BT	Hiraj et al., "A Novel Putative Tyrosine Kinase Receptor Encoded by the <i>eph</i> Gene," <i>Science</i> , 238:1717-1720 (December 18, 1987).
	BU	Huang et al., "The Hematopoietic Growth Factor KL is Encoded by the <i>Sf</i> Locus and Is the Ligand of the <i>c-kit</i> Receptor, the Gene Product of the <i>W</i> Locus," <i>Cell</i> , 63:225-233 (October 5, 1990)
	BV	Lichter et al., "Delineation of Individual human chromosomes in metaphase and interphase cells by <i>in situ</i> suppression by bridization using recombinant DNA libraries," <i>Hum. Genet.</i> , 80:224-234 (1988).

EXAMINER

g. [signature]

DATE CONSIDERED

6/4/9

\* EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include any copy of this form with next communication to applicant.

Form PTO-1449 (MODIFIED)	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY. DOCKET NO. 038602-1026	SERIAL NO. 08/426,509
<b>INFORMATION DISCLOSURE CITATION</b>  <i>(Use several sheets if necessary)</i>		APPLICANT Axel ULLRICH et al.	
		FILING DATE 04/21/1995	GROUP ART UNIT 1646-1647

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)		
	BW	Morgenstern and Land, "Advanced mammalian gene transfer: high titre retroviral vectors with multiple drug selection markers and a complementary helper-free packaging cell line," <i>Nucl. Acids Res.</i> , 18(12):3587-3596 (1990).
	BX	Mustelin and Bum, "Regulation of src family tyrosine kinases in lymphocytes," <i>TIBS</i> . 18:215-220 (1993).
	BY	Pear et al., "Production of high-titer helper-free retroviruses by transient transfection," <i>Proc. Natl. Acad. Sci. USA</i> . 90:8392-8396 (September, 1993).
	BZ	Sherr et al., "The c-fms Proto-oncogene Product is Related to the Receptor for the Mononuclear Phagocyte Growth Factor, CSF-1," <i>Cell</i> . 41:665-676 (July, 1985).
	CA	Staunton et al., "The Arrangement of the Immunoglobulin-like Domains of ICAM-1 and the Binding Sites for LFA-1," <i>Cell</i> . 61:243-254 (April 20, 1990).
	CB	Wang, "Nuclear protein tyrosine kinases," <i>TIBS</i> . 19:373-379 (September, 1994).
	CC	Wilks, "Two putative protein-tyrosine kinases identified by application of the polymerase chain reaction," <i>Proc. Natl. Acad. Sci. USA</i> . 86:1603-1607 (March 1989).
	CD	Tsukada et al., <i>Cell</i> . 72:279-290, 1991.
	CE	Yamada et al., <i>Biochem. Biophys. Res. Comm.</i> 172:231-240, 1993.
	CF	Hamaguchi et al., "Characterization of mouse non-receptor tyrosine kinase gene, HYL," <i>Oncogene</i> , (1994), 9, 3371-3374, Macmillan Press Ltd., 1994.
	CG	Tamagnone et al., "BMX, a novel nonreceptor tyrosine kinase gene of the BTK/ITK/TEC/TKX family located in chromosome Xp22.2," <i>Oncogene</i> (1994), 9, 3683-3688, Macmillan Press Ltd., 1994.
48	CH	Cance et al., <i>Cell Oncogene &amp; Diff.</i> , Vol. 5, pp. 1347-1355, 1994.

*G. Schrey* 614607

## LIST OF REFERENCES CITED BY APPLICANT



(Use several sheets if necessary)

ATTY. DOCKET NO.

7683-074

SERIAL NO.

08/426,509

APPLICANT

Ullrich *et al.*

FILING DATE

April 21, 1995

GROUP

1812

## U.S. PATENT DOCUMENTS

*EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE

## FOREIGN PATENT DOCUMENTS

DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
					YES	NO


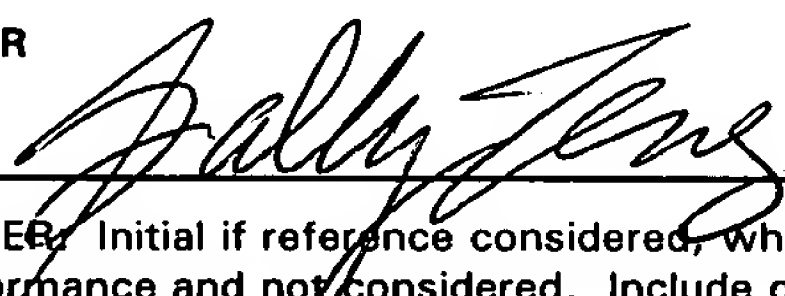
## OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, Etc.)

SP1	AA	Aaronson, Stuart A., November 22, 1991, "Growth Factors and Cancer," <u>Science</u> 254:1146-1153
SP1	AB	Arpala <i>et al.</i> , March 11, 1994, "Defective T Cell Receptor Signaling and CD8 <sup>+</sup> Thymic Selection in Humans Lacking Zap-70 Kinase," <u>Cell</u> 76:947-958
SP1	AC	Bearman <i>et al.</i> , January, 1979, "Acute ("Malignant") Myelosclerosis," <u>Cancer</u> 43(1):279-293
SP1	AD	Bennett <i>et al.</i> , January 14, 1994, "Identification and Characterization of a Novel Tyrosine Kinase from Megakaryocytes," <u>J. of Biol. Chem.</u> , 269(2):1068-1074
SP1	AE	Bolen, Joseph B., 1993, "Nonreceptor tyrosine protein kinases," <u>Oncogene</u> 8:2025-2031
SP1	AF	Brauninger <i>et al.</i> , December 22, 1993, "Characterization of the human CSK locus," <u>Ontogene</u> 8:1365-1369
SP1	AG	Brauninger <i>et al.</i> , 1992, "Isolation and characterization of a human gene that encodes a new subclass of protein tyrosine kinases," <u>Gene</u> 110:205-211
SP1	AH	Butler <i>et al.</i> , June 15, 1982, "Idiopathic Acquired Sideroblastic Anemia Terminating in Acute Myelosclerosis," <u>Cancer</u> 49(12):2497-2499
SP1	AI	Eiseman <i>et al.</i> , October, 1990, " <i>src</i> -Related Tyrosine Protein Kinases as Signaling Components in Hematopoietic Cells," <u>Cancer Cells</u> 2(10):303-310
SP1	AJ	Fohlmeister <i>et al.</i> , 1986, "Acute Megakaryocytic Myelosis Preceded by Myelodysplasia. Report of a Case and Review of the Literature," <u>VNU Science Press, Utrecht Akademai Kiado</u> 2:151-160
SP1	AK	Hardie, D. Grahame, 1990, "Roles of Protein Kinases and Phosphatases in Signal Transduction," <u>Society for Experimental Biology</u> , pp. 241-255
SP1	AL	Heyeck <i>et al.</i> , January, 1993, "Developmental regulation of a murine T-cell-specific tyrosine kinase gene, <i>Tsk</i> ," <u>PNAS USA</u> 90:669-673
SP1	AM	Hoffman, Ronald, September, 1989, "Regulation of Megakaryocytopoiesis," <u>Blood</u> 74(4):1196-1212
SP1	AN	Ishida <i>et al.</i> , 1993, "Biological and Biochemical Characteristics of Murine Megakaryoblastic Cell Line L8057," <u>Exp. Hematol.</u> 21:289-298
SP1	AO	Kawakami <i>et al.</i> , December, 1986, "Isolation and Oncogenic Potential of a Novel Human <i>src</i> -Like Gene," <u>Molecular and Cellular Biology</u> 6(12):4195-4201
SP1	AP	Kipreos <i>et al.</i> , April 13, 1990, "Differential Phosphorylation of c-Abl in Cell Cycle Determined by <i>cdc2</i> Kinase and Phosphatase Activity," <u>Science</u> 248:217-220
SP1	AQ	Koch <i>et al.</i> , May 3, 1991, "SH2 and SH3 Domains: Elements That Control Interactions of Cytoplasmic Signaling Proteins," <u>Science</u> 252:668-674
SP1	AR	Lee <i>et al.</i> , 1994, "Cloning of <i>FRK</i> , a novel human intracellular <i>SRC</i> -like tyrosine kinase-encoding gene," <u>Gene</u> 138:247-251

SP1	AS	Long, Michael W., 1993, "Population Heterogeneity Among Cells of the Megakaryocyte Lineage," <u>Stem Cells</u> 11:33-40
SP1	AT	Lu <i>et al.</i> , 1993, "Review of the Cytogenetic Changes in Acute Megakaryoblastic Leukemia: One Disease or Several?," <u>Cancer Genet Cytogenet</u> 67:81-89
SP1	AU	Maness, Patricia F., 1992, "Nonreceptor Protein Tyrosine Kinases Associated with Neuronal Development," <u>Dev. Neurosci</u> 14:257-270
SP1	AV	Mano <i>et al.</i> , 1993, "Expression of a novel form of <i>Tec</i> kinase in hematopoietic cells and mapping of the gene to chromosome 5 near <i>Kit</i> ," <u>Oncogene</u> 8:417-424
SP1	AW	Marino, Gregory G., October, 1989, "Acute myelofibrosis: Report of a case and review of current literature," <u>JAOA</u> 89(10):1323-1329
SP1	AX	Mayer <i>et al.</i> , March, 1988, "A novel viral oncogene with structural similarity to phospholipase C," <u>Nature</u> 332:272-275
SP1	AY	Moody <i>et al.</i> , 1989, "Florid radiological appearance of megakaryoblastic leukaemia - an aid to earlier diagnosis," <u>Pediatric Radiology</u> 19:486-488
SP1	AZ	Morgan <i>et al.</i> , June 2, 1989, "Mitosis-Specific Phosphorylation of p60 <sup>c-src</sup> by p34 <sup>cdc2</sup> -Associated Protein Kinase," <u>Cell</u> 57:775-786
SP1	BA	Muller <i>et al.</i> , 1992, "BCR First Exon Sequences Specifically Activate the BCR/ABL Tyrosine Kinase Oncogene of Philadelphia Chromosome-Positive Human Leukemias," <u>Mol. Cell. Bio.</u> 11:1785-1792
SP1	BB	Musacchio <i>et al.</i> , September, 1993, "The PH domain: a common piece in the structural patchwork of signalling proteins," <u>TIBS</u> 18:343-348
SP1	BC	Pawson <i>et al.</i> , October 30, 1992, "SH2 and SH3 Domains: From Structure to Function," <u>Cell</u> 71:359-362
SP1	BD	Posada <i>et al.</i> , June, 1992, "Molecular Signal Integration. Interplay Between Serine, Threonine, and Tyrosine Phosphorylation," <u>Mol. Biol. of the Cell</u> 3:583-592
SP1	BE	Rawlings <i>et al.</i> , July 16, 1993, "Mutation of Unique Region of Bruton's Tyrosine Kinase in Immunodeficient XID Mice," <u>Science</u> 261:358-361
SP1	BF	Sadowski <i>et al.</i> , December, 1986, "A Noncatalytic Domain Conserved among Cytoplasmic Protein-Tyrosine Kinases Modifies the Kinase Function and Transforming Activity of Fujinami Sarcoma Virus P130 <sup>gag-fps</sup> ," <u>Molecular and Cellular Biology</u> 6(12):4396-4408
SP1	BG	Sakano <i>et al.</i> , 1994, "Molecular cloning of a novel non-receptor tyrosine kinase, <i>HYL</i> (hematopoietic consensus tyrosine-lacking kinase)," <u>Oncogene</u> 9:1155-1161
SP1	BH	Schlessinger, Joseph, November, 1988, "Signal transduction by allosteric receptor oligomerization," <u>TIBS</u> 13:443-447
SP1	BI	Smith <i>et al.</i> , 1990, "Myelofibrosis: A Review of Clinical and Pathologic Features and Treatment," <u>Oncology/Hematology</u> 10(4):305-314
SP1	BJ	Soriano <i>et al.</i> , February 22, 1991, "Targeted Disruption of the <i>c-src</i> Proto-Oncogene Leads to Osteopetrosis in Mice," <u>Cell</u> 64:693-702
SP1	BK	Ullrich <i>et al.</i> , April 20, 1990, "Signal Transduction by Receptors with Tyrosine Kinase Activity," <u>Cell</u> 61:203-212
SP1	BL	Veillette <i>et al.</i> , February, 1992, "Src-related protein tyrosine kinases and T-cell receptor signalling," <u>TIG</u> 8(2):61-66
SP1	BM	Vetrie <i>et al.</i> , January 21, 1993, "The gene involved in X-linked agammaglobulinaemia is a member of the <i>src</i> family of protein-tyrosine kinases," <u>Nature</u> 361:226-233
SP1	BN	Weaver <i>et al.</i> , September, 1991, "CD8 <sup>+</sup> T-Cell Clones Deficient In the Expression of the CD45 Protein Tyrosine Phosphatase Have Impaired Responses to T-Cell Receptor Stimuli," <u>Mol. and Cell. Biol.</u> 11(9):4415-4422
SP1	BO	White <i>et al.</i> , 1987, "A Cascade of Tyrosine Autophosphorylation in the $\beta$ -Subunit Activates the Phosphotransferase of the Insulin Receptor," <u>J. Biol. Chem.</u> 263:2969-2980



14

	BP	Zsebo <i>et al.</i> , October 5, 1990, "Stem Cell Factor Is Encoded at the <i>S/</i> Locus of the Mouse and Is the Ligand for the <i>c-kit</i> Tyrosine Kinase Receptor," <u>Cell</u> <u>63</u> :213-224
EXAMINER 		DATE CONSIDERED 6/3/96
*EXAMINER: Initial if reference considered, whether or not citation is in conformance with <b>MPEP 609</b> ; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.		

## SUPPLEMENTAL LIST OF REFERENCES CITED BY APPLICANT

(Use several sheets if necessary)

ATTY. DOCKET NO.

7683-074

SERIAL NO.

08/426,509

APPLICANT

Ullrich *et al.*

FILING DATE

April 21, 1995

GROUP

~~N/A~~ 1812

## U.S. PATENT DOCUMENTS

*EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE

## FOREIGN PATENT DOCUMENTS

	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
						YES	NO

## OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, Etc.)

	BQ	Cance <i>et al.</i> , 1993, "Novel Protein Kinases Expressed in Human Breast Cancer," <u>International Journal of Cancer</u> 54(4):571-577

EXAMINER

DATE CONSIDERED

6/3/96

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.